

WHAT IS CLAIMED AS NEW AND IS DESIRED TO BE SECURED BY LETTERS

PATENT OF THE UNITED STATES IS:

1. An image processing apparatus, comprising:
an image input device configured to input image data;
an image condition determining device configured to
determine whether the input image data input by said image
input device is in a true backlight condition or in a halation
condition; and

a processing device configured to perform a specific
process on the input image data based on the condition of the
input image data determined by said image condition
determining device.

2. The image processing apparatus according to claim
1, wherein said image condition determining device generates a
histogram showing a luminance of the image data based on the
input image data and evaluates a polarization degree of the
histogram so as to determine the condition of the input image
data.

3. The image processing apparatus according to claim 2,
wherein said image condition determining device evaluates the
polarization degree of the histogram using frequency and
gradient values of the histogram.

4. The image processing apparatus according to claim 1, wherein the specific process performed by said processing device includes a dynamic range correction and a tone curve correction to be performed on the input image data based on the determination made by said image condition determining device.

5. A method for processing image data, comprising:
inputting image data;
determining whether the input image data is in a true backlight condition or in a halation condition;
performing a specific process on the input image data based on the condition of the input image data determined in the determining step.

6. The method according to claim 5, further comprising:
generating a histogram showing a luminance of image data based on the input image data; and
evaluating a polarization degree of the histogram to determine the condition of the input image data.

7. The method according to claim 6, wherein the polarization degree of the histogram is evaluated using frequency and gradient values of the histogram.

8. The method according to claim 5, wherein the

specific process performed on the input image data based on the determination made in the determining step includes a dynamic range correction and a tone curve correction.

9. An image processing apparatus, comprising:
an image input means for inputting image data;
an image condition determining means for determining whether the input image data input by said image input means is in a true backlight condition or in a halation condition;
and

a processing means for performing a specific process on the input image data based on the condition of the input image data determined by said image condition determining means.

10. The image processing apparatus according to claim 9, wherein said image condition determining means generates a histogram showing a luminance of the image data based on the input image data and evaluates a polarization degree of the histogram so as to determine the condition of the input image data.

11. The image processing apparatus according to claim 10, wherein said image condition determining means evaluates the polarization degree of the histogram using frequency and gradient values of the histogram.

12. The image processing apparatus according to claim 9, wherein the specific process performed by said processing means includes a dynamic range correction and a tone curve correction to be performed on the input image data based on the determination made by said image condition determining means.

13. A computer program product for processing image data, comprising:

a first computer code for determining whether input image data is in a true backlight condition or in a halation condition; and

a second computer code for performing a specific process on the input image data based on the condition of the input image data determined by the first computer code.

14. The computer program product according to claim 13, further comprising:

a third computer code for generating a histogram showing a luminance of the image data based on the input image data; and

a fourth computer code for evaluating a polarization degree of the histogram to determine the condition of the input image data.

15. The computer program product according to claim 14,

further comprising:

a fifth computer code for evaluating a polarization degree of the histogram using frequency and gradient values of the histogram.

16. The computer program product according to claim 13, wherein the second computer code performs a dynamic correction and a tone curve correction on the input image data based on the determination made by the first computer code.

17. A computer readable recording medium configured to record the computer program product recited in Claim 13.

18. A computer readable recording medium configured to record the computer program product recited in Claim 14.

19. A computer readable recording medium configured to record the computer program product recited in Claim 15.

20. A computer readable recording medium configured to record the computer program product recited in Claim 16.